UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
999 18th STREET - SUITE 500
DENVER, COLORADO 80202-2405

MEMORANDUM

DATE: February 28, 1990

TO: Donna Perla, Chief (x 1798)
RCRA Implementation, Colorado/Montana Section

FROM: Tom Pike, Chief
UIC Implementation Section

SUBJECT: RCRA Hazardous Waste Determination

As an attachment to an application for a Class I (Non-Hazardous) injection well, the following water analyses were included. Per the amended agreement between WMD and HWMD, we would like a determination of the hazardous nature of these fluids and the possible applicability of the Land Ban on their disposal. A short description of the fluid sources and sampling techniques follows.

The proposed well is intended for disposal of fluids drawn from Underground Storage Tank (UST) cleanup sites. On the chain of custody record provided by the operator, Station #2 indicates fluids taken from these sources. This fluid was sampled from a vacuum truck that was hauling water from a UST site. A sampling device was lowered from a thief hatch on the roof of the truck's tank and the fluid was sampled at the oil/water contact from within the tank.

Station #1 was taken from oilfield hauling trucks and oilfield tanks. Sampling methods are not known at this time, but the permit applicant could easily provide that information if it is needed.

Station #3 is from a disposal pit in Wyoming. The pit operator expressed an interest in having some of his water injected into the subject well, so the permit applicant sampled the skim on top of the pit. The operator of the pit evidently stores anti-freeze in the pit. Other than the fact that the sample was taken from the skim on top of the pit, nothing else is known about the sampling.

If you need information regarding sample gathering, sample storage, or sample transportation, the permit applicant may be contacted, directly. We have been speaking with Mr. Robert Fullop (with Wright's Disposal) at (303) 426-8911. The lab that

ran the analyses is CenrefLabs, in Brighton, CO. Their telephone number is (303) 659-1559. They should be able to provide additional information on the analytical techniques.

If you could provide us with expertise on sampling these types of fluids, the assistance would be greatly appreciated. The operator was told to have analyses performed for BTEX, TPH, Corrosivity, and Ignitability. If you see the need for any additional sampling and analyses, or a change in the sampling procedures, please let us know.

I understand that the proposed TCLP ruling is due soon. Please let us know how those proposed limits may impact this project.

WRIGHT'S OIL & GAS, INC.

JANUARY 26, 1990

MR. FRANK J. SUKLA
SUKLA FARMS
4468 W.C.R. 19
Fort Lupton, CO. 80621

RE: SUCKLA FARMS INJECTION WELL NO.1

Dear Mr. Sukla:

This letter is to inform you that WRIGHT'S has filed for a Class I designation from the EPA. A Class I designation will allow WRIGHT'S to dispose of water produced from oil and gas wells and their operations and non-hazardous water from industries. Included in the non-hazardous industrial water would be included specific water from specified sources. These sources are - re-claimed surface water from the replacement of underground fuel storage tanks, pit water from oilfeild wash pits and certain construction site envolving contaminated surface water from cement run-off and stored fuels and motor oils.

WRIGHT'S is currently operating the Suckla Farms Injection Well as a Class II well which onlt deals with produced water from oil and gas operations.

Should you have any questions regarding this notice or any part of our operation, please contact me at the phone number listed below.

SINCERELY,

Robert A. Fullop
Project Engineer

RAF/tf
CC: Chuck Tinsley
EPA

Certified

9270 Quitman • Westminster, CO 80030 • (303) 426-8911

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
999 18th STREET - SUITE 500
DENVER, COLORADO 80202-2405

Ref: 8 HWM-RI
Date: September 5, 1990

MEMORANDUM

TO: Tom Pike, Chief
UIC Implementation Section

FROM: Tom Burns, Chief
8 HWM-RI, CO/MT Section

SUBJECT: Response to RCRA Hazardous Waste Determination Request of February 28, 1990

We apologize for the extreme delay in responding to your request of February 28, 1990. A combination of changes in staff personnel and the complexity of this issue, coupled with additional regulatory promulgations, created numerous delays.

Mike Gansecki of my staff researched this issue. The issue is complicated by the fact that RCRA waste definition rules, UIC considerations, UST rules, LDR rules, the TCLP promulgation, and some chemistry assessment were involved.

The attached table summarizes the information developed in assessing your determination request. As we understand the request and the data, a number of oilfield wastewater streams involved in an Underground Storage Tank cleanup were sampled for RCRA hazardous waste characteristics. Flashpoint and pH can be used to assess flammability and corrosivity characteristics, while the BETX analysis can be applied to considerations under the recently promulgated TCLP rule (FR, 55, #61, pp.11799-11876, March 29, 1990).

The first and primary consideration under RCRA regulations is whether the wastes are hazardous. From the information presented, it appears that these are wastes (with the possible exception of the skim pit storage of anti-freeze), are oilfield production and development wastes. 40 CFR Section 261.4(b)(5) reads as follows:

> "The following solid wastes are not hazardous wastes:.....
> (5) Drilling fluids, produced waters and other wastes associated with the exploration, development or production of crude oil, natural gas or geothermal energy."

If it is established that the sampled waste streams are in fact excluded as hazardous wastes, then neither the land disposal restrictions, TCLP rule, nor the other characteristics apply. For your information, the attached table shows how the wastes would be considered under the characteristics (including TCLP), if the wastes were under consideration as potentially hazardous. All would fail the TCLP for benzene (D018), and all but sample stream #2, would also fail the flammability characteristics test.

The brief description given in your memo suggests that the operator of the skim pit (sample #3) may have been or be storing/disposing of anti-freeze. Ethylene glycol itself is not a listed hazardous waste. It's chemical properties in the pure state do indicate potential flammability. For this reason, the table identifies this waste stream as potentially regulated. However, with the inordinately high levels of BETX in at least one of the two ground water samples (almost 10% BETX by weight), these volatile aromatics are very likely to cause most of the flammability. It could be somewhat difficult to sort out the low flash point differences due to the ethylene glycol.

The table also lists the status under land disposal restrictions (LDRs) for these potential characteristics. For wastes restricted by flammability (D001), there are a number of different treatability groups specified under the Third Third Land Disposal Restrictions (FR, 55, #106, pp.22520-22720, June 1, 1990. For liquid wastewater streams with less than 10% total organic carbon, the rather cryptic "DEACT" or deactivation is specified as the treatment method. It essentially means that the flammability characteristic must be removed. This could be accomplished by blending/treating in a wastewater treatment system, other biological treatment, and perhaps chemical treatment (see pp. 22543-22545 of the above cited Federal Register).

The ground water waste stream identified as 1482-U shows some surprisingly high levels of BETX, and very close to the 10% D001 cutoff. Above this level, incineration or product recovery are the required BADT under the land disposal restrictions. Certainly, the owner/operator should consider recovering some of this product at these levels, if there is sufficient volume.

While all the samples fail the TCLP for benzene (D018), there are currently no land disposal restrictions in effect. EPA must promulgate such standards within six months of promulgation of new waste codes. However, if the Agency does not do so in this time frame, the wastes are not prohibited from land disposal.

Jim Rakers in the UST program was asked to review this determination. He pointed out another RCRA/UST consideration:

Under the recently promulgated TCLP rule, petroleum-contaminated media also fall under the 261.4 exemption:

> "The following solid wastes are not hazardous wastes:.....
> (10) Petroleum-contaminated media and debris that fail the test for the Toxicity Characteristic of 261.24 and are subject to the corrective action regulations under Part 280 of this chapter."

Since this is a UST cleanup, it appears that the media (such as ground water and soils) are exempt from RCRA Subtitle C, and hence the land disposal restrictions. Jim pointed out that, by contrast, leaks from an above-ground storage tank would be subject to Subtitle C and I rules and LDRs. These wastes would then also be subject to UIC rules, if injected.

Please contact Mike Gansecki (x1510) of my staff if you need further assistance on this matter.

Attachment

FCD:September 5, 1990:maga

STATUS OF SAMPLED OILFIELD WASTES

SAMPLE NUMBER	WASTE IDENT	SAMPLE MEDIUM	RCRA STATUS	RCRA CHARACTERISTICS FLAMM[1]	CORROS[2]	TCLP[3]	LDR RESTRICTED?[4]
#1(1480)	Oilfield wastes Wash pit	water	Exemption 261.4(b)(5)	Yes D001	No	Yes (Benzene-D018)	DEACT No Not at present
#2 (1481)	Oilfield wastes Truck wash	water	Exemption 261.4(b)(5)	No	No	Yes (Benzene-D018)	No No Not at present
#3(1482-L)	Ground Water Oilfield Wastes Skim Pit?	water	Exemption 261.4(b)(5)	ND		ND Yes D018	? ? Not at present
#3(1482)	Ground Water Oilfield Wastes Skim Pit?	water	Exemption 261.4(b)(5)	Yes D001	No	ND	DEACT/INCIN No ?
#3 (1482-U)	Ground Water Oilfield Wastes	water	Exemption 261.4(b)(5)	ND	ND	Yes D018	? ? Not at present
#3(1482)	Skim Pit Anti-freeze Disposal	water	Potentially RCRA regulated, if flammability due to anti-freeze	Yes D001			DEACT/INCIN

1 RCRA-regulated as a characteristic D001 if flashpoint $<140^{o}F$

2 RCRA-regulated as a characteristic D002 if $pH \geq 12$ or $pH \leq 2$

3 RCRA-regulated as characteristic D018 if benzene > 500 ug/l. Other BETX species do not have characteristic limits.

4 Wastes are potentially LDR restricted only if they are first determined to be hazardous wastes.

PS Form 3800, June 1985 ☆U.S.G.P.O. 1989-234-555

P 468 399 850

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